

2012 National Science Bowl[®]

Official Academic Competition Rules

Changes and clarifications in bold/italic

Eligibility Requirements

1. Each competing team consists of four or five student members (only four will be playing at any time). To be eligible to compete, a high school student must be enrolled for the current school year in grades nine, ten, eleven or twelve at the team's school, and be ***born on or after May 1, 1992***. To be eligible to compete, a middle school student must be enrolled for the current school year in grades six, seven, or eight at the team's school, ***and be born on or after September 1, 1996 and on or before April 26, 2002***. A student may not compete in both the middle school and high school events in the same year.

Teams of home school students, girl scouts, boy scouts and science clubs are welcome to participate; however, if the school a student attends is competing in a Regional Science Bowl, then that student may compete only on a team from that school.

2. No school or student group may compete in more than one regional competition. No student may compete on more than one team. Each regional coordinator will determine if more than one team from a middle or high school will be allowed to participate in that regional as well as the geographic area their regional will encompass. No more than 3 teams from one middle or high school or student group may compete in a regional event.
3. To be eligible for the National Science Bowl[®] finals, a student must have competed on the team that won the Regional Science Bowl or on the next highest place team that accepts the invitation if the first place team declines to attend. The winning team from each regional tournament is eligible to be invited to participate at the National finals ***April 26 – April 30, 2012***.

Middle School Winning Team to Attend Nationals: If your regional event includes both a car competition and an academic event, the team that will go to the National Science Bowl[®] in Washington, DC will be the winning academic team. The winning regional car team will not attend the National Science Bowl[®] unless they are also the regional academic winning team.

4. By ***March 9, 2012***, the winning team's coach is required to inform the National event coordinator of its availability to participate at the Nationals. During this time of the school year, students are participating in a variety of activities and academic events that may conflict with their participation in the National Science Bowl[®] (including, but not limited to, state athletic tournaments, proms, International Baccalaureate, Advanced Placement and SAT exams). In the interest of safety, continuity, and educational value, the National Science Bowl[®] requires students to take part in ALL of its events and activities. Therefore, no waivers will be granted or special arrangements made for students to participate in any conflicting activities or exams. If team members are involved in these pursuits, the students will need to determine which activity or event is in their best interest and make their selection by ***March 9, 2012***. All teams must arrive and depart on the designated dates and participate in all events, as scheduled throughout the duration of the National event, including those on Saturday and Sunday. If the winning regional team (at least 4 students) is unable to participate in all activities, at all scheduled times, the next highest place team will be invited to replace them.

Competition Structure

5. Regional competitions have the option of choosing their tournament style, e.g. only double or single elimination, only round robin, or a combination of both.
6. The National finals will use a round robin tournament format with several divisions for the preliminary rounds. For the preliminary rounds at the Nationals, teams will be placed in divisions by drawing lots, with the number of teams per division as equal as possible. The number of teams in each division will depend on the number of teams participating in the competition. Each team will play every team in its division. At the end of each round robin match, regardless of the overall score, two points are awarded for a win, one point for a tie, and zero points for a loss. The top 2 teams from each high school round robin division will move on to the seeded double elimination tournament. The middle school double elimination tournament will include 16 teams: the top two teams from each of the six divisions, plus four of the six third-place teams (see Rule 43 for further details.)
7. For games that occur in the elimination tournaments, if the score is tied at the end of the regulation time period, a series of five toss-up questions will be used to break the tie. Interrupt, blurt, and consultation penalties are in effect during tie-breaker.

The Questions

8. Two types of questions will be used: toss-up and bonus questions. A toss-up question may be answered by any of the four members of either team that are actively competing. A team answering a toss-up question correctly will always get a chance to answer a bonus question; the other team is ineligible. No consultation is allowed on toss-up questions. The high school question categories are: Biology, Chemistry, Earth and Space Science, Energy, Mathematics, and Physics. The middle school question categories are: Life Science, Physical Science, Earth and Space Science, Energy, Mathematics and General Science.
9. No team will have more than one opportunity to answer a toss-up question.
10. Questions are either multiple-choice or short answer. A participant may answer a multiple-choice question with either the letter answer (W, X, Y or Z) or the verbal answer; however, if the verbal answer is given, it must be exactly as indicated in the question or as read by the moderator. The only acceptable answer to a multiple-choice question will be the best of the four choices indicated in the question; ***in the event that more than one of the four choices is equally correct, then any of the correct choices will be acceptable.***
11. Once read in its entirety, a question will not be re-read.
12. For toss-up questions, the first player on either team to activate the lock-out buzzer system wins the right to answer the question, except that no player may buzz in until AFTER the moderator has identified the subject area of the question. If a player buzzes in prior to the reading of the subject area, the moderator will inform the player that he/she has buzzed in too soon. The moderator may add time back to the clock, if necessary.
13. On any toss-up or bonus question, the first response given, as determined by the officials, is the only one that counts. However, if a participant gives both a letter answer and a scientific answer to a multiple choice question, both parts must be correct. Any prefacing remarks that do not directly answer the question, such as "my answer is" or repeating the question, will be

considered delaying the game and counted as an incorrect answer. (Note: a very short “um”, “er”, or vocal stumble is acceptable, provided the officials do not consider it delaying the game.)

14. If the first team’s answer to a toss-up question is wrong and the question was completely read, the other team is given the opportunity to answer it. The second team is allowed a full 5 seconds to buzz in after the moderator indicates the answer is wrong or that a blurt or consulting has occurred.
15. The answer to a bonus question must come from the team’s captain, including when the question has been interrupted. Moderators should ignore an answer from anyone but the captain on the bonus question. ***The team that is not playing the bonus should remain quiet during the bonus; if the non-playing team engages in behavior that is visually or verbally distracting, their opponents will be awarded the 10 points for that bonus question, and the moderator will proceed to the next toss-up.***

Verbal Recognition & Consulting

16. Before answering a toss-up question, the team member who has buzzed in must be verbally recognized by the moderator or scientific judge. (Before the match, the official who will be recognizing participants will be identified.) If a student was not recognized, it is treated as a non-answer (blurt) and the moderator will award 4 points to the opposing team, but will not indicate whether the answer was right or wrong. The toss-up question is then offered to the opposing team, if still eligible. If the question has not been completely read, the question is reread in its entirety, and the opposing team has an opportunity to answer the toss-up question, and, if correct, a chance to answer the bonus question.
17. On toss-up questions, no consultation among team members may occur. Prior to buzz: Should consultation among any of the team members occur without a team member buzzing in, or if any team member should give an answer without buzzing in, any answer given does not count, the moderator will not indicate whether the answer given was correct or incorrect, and the team loses the right to answer the toss-up question. The question is then offered to the opposing team, if still eligible. After a buzz: If consulting occurs, the consulting is then classified as a blurt as in the previous rule, and 4 penalty points will be awarded to the opposing team.

Timing

18. The match is played until either the time expires or all of the toss-up questions (and earned bonuses for correct toss-ups) have been read. Regional competitions will have two 8-minute halves with a 2-minute break (halves at the Nationals are 10 minutes). Each half begins with a toss-up question. Note: At the National finals, some of the High School Double Elimination rounds will contain visual bonus questions. The rounds containing visual bonus questions will have two 12-minute halves with a 2-minute break.
19. After reading a toss-up question, the moderator will allow 5 seconds for the two teams to respond before proceeding to the next toss-up question. Timing begins after the moderator has completed reading the toss-up question.
20. A participant who has buzzed in on a toss-up question must answer the question promptly after being verbally recognized by the moderator or scientific judge. After recognizing a participant, the moderator will allow for a natural pause (up to 2 seconds), but if the moderator determines that stalling occurred, it will be treated as a wrong answer.

21. After a team member has answered a toss-up question correctly, the team is given the opportunity to answer a bonus question. The team will have 20 seconds for its captain to begin to give its answer to the bonus question. Consultation among team members is allowed on bonus questions. Note: On visual bonus questions at the National finals, the team will have 30 seconds for its captain to begin to give its answer to the bonus visual question.
22. On a bonus question, the signal “5 SECONDS” will be given by the timekeeper after 15 seconds of the allowed 20 seconds have expired. Additionally, the timekeeper will indicate the end of the 20-second bonus period by saying “TIME.” If the team captain has not begun the response before the timekeeper calls “TIME,” the answer does not count. If the team captain has begun the response, he/she may complete the answer, but may not stall. Note: On visual bonus questions at the National finals, the signal “5 SECONDS” will be given by the timekeeper after 25 seconds of the allowed 30 seconds have expired.

Summary of Timing – Regional Events

Type of Question	Time Allowed
Toss-up	Teams have 5 seconds to buzz in after question is read. If no team has buzzed in, say “TIME”
Buzz in after Toss-up has been read	Must answer within natural pause (up to 2 seconds). If no answer, say “TIME”
Bonus	Team gets 20 seconds to discuss. After 15 seconds, Timer will announce “5 seconds”. If no answer after 20 seconds, say “TIME”
End of Game	Each half is 8 minutes. At 8 minutes, say “Game”. If team is in process of answering a question, just turn off the clock and announce “Game” when process of the question has been completed

Scoring

23. Toss-up questions are worth 4 points, and bonus questions are worth 10 points.
24. If a toss-up question is interrupted, the player recognized, and the answer correct, the team will receive 4 points. If the answer is incorrect, or if a player from the team buzzing in answers without being verbally recognized, or if consultation occurs on the team buzzing in, 4 points are added to the opposing team’s score, the question is reread in its entirety, and the opposing team has an opportunity to answer the toss-up question, and, if correct, the chance to answer the bonus question.
25. The double interrupt. If a toss-up question is interrupted and a team incurs a penalty as in the previous rule, 4 points are added to the opposing team’s score. The question is then reread in its entirety. However, if the opposing team interrupts the re-reading and subsequently incurs a penalty as in the previous rule, 4 points are added to the first team’s score. The moderator will give the correct answer and move on to the next toss-up question.

26. If the moderator inadvertently gives the answer to a toss-up question without giving either team a chance to respond, no points are awarded and the moderator goes on to the next toss-up question.
27. If the moderator inadvertently gives the answer to a toss-up question before allowing the second team to respond (after an incorrect answer, or an answer given without the team member having been recognized) the next toss-up question will be read to the second team in place of the inadvertently answered question. If this situation occurs on question #25, the officials will obtain a replacement toss-up question.
28. On a toss-up question, if the moderator inadvertently recognizes a player other than the one who buzzed in, the player who buzzed in will be allowed to answer as though he/she had been correctly recognized.
29. On a bonus question, if the moderator inadvertently responds to someone other than the captain while indicating whether an answer is correct, the next bonus question will be read to the team eligible for the bonus. If this situation occurs on question #25, the officials will obtain a replacement bonus question.

Summary of Scoring

Type of Question	Points Awarded
Correct Toss-up Incorrect Toss-up	+4 points & eligible for bonus +0 points
Correct Bonus <i>(or distraction by non-playing team)</i> Incorrect Bonus	+10 points +0 points
Interrupted Toss-up: - Correct Answer - Incorrect Answer	+4 points & eligible for bonus +4 points to opposing team
After a team member buzzes in: - Unrecognized Toss-up (Blurt) - Unrecognized Interrupted Toss-up (also a Blurt) - Consultation among players	+4 points to opposing team
Before a team member buzzes in: - Answering a toss-up - Consultation among players	+0 points but team will be disqualified from toss-up

Challenges

30. Challenges must be made before the moderator begins the next question, or for the last question of a half, within three seconds of the end of that half. All challenges must come from the four members of each team who are actively competing. The fifth team member and/or the coach may not object verbally or by signal. If either the fifth team member or the coach objects verbally or by signaling to the active team members, the challenge will not be allowed. All decisions of the judges are final.
31. Challenges may be made either to scientific content (i.e., whether an answer is scientifically correct or not) or to the administration of the rules (e.g., whether the timing or scoring is correct). Challenges may NOT be made to judgment calls by the officials, including but not limited to whether a question has been interrupted, whether 5 seconds have elapsed before a student buzzes in on a toss-up, whether 20 seconds have elapsed before a captain begins answering a bonus, whether the non-playing team is engaging in distracting behavior during a bonus, whether a half has expired before a new toss-up question begins, whether a stall or consultation has occurred, whether a player has given a first response, whether time should be added back to the clock, or whether a non-playing audience member has shouted an answer, including whether the shouter is associated with one of the two teams.
32. Challenges to scientific content will be limited to two unsuccessful challenges per team per round, including tiebreaker questions. Successful challenges do not count against this limit. After the second unsuccessful challenge for a team during a round, that team will not be allowed any further challenges to scientific content during that round. Challenges to rules may be made at any time; however, whether a scientific challenge has been made and whether it has been successful are judgment calls, and may not be challenged, as per Rule 31.
33. Should a question or challenge arise during a competition, the competition and the clock will be stopped until the question is resolved. Once the question has been resolved, the match will continue from that point. Should the moderator decide that some time was lost due to the interruption in play, the moderator will put the appropriate amount of time back on the clock.
34. If a team's answer to a toss-up question is judged incorrect, and they wish to challenge the ruling on the basis of scientific content, but the opposing team is still eligible for the toss-up, the first team should hold its challenge until after the opposing team has completed its toss-up opportunity. The first team should then state its challenge before the next bonus or toss-up question is read. If the challenge is upheld, the second team's answer will be disregarded and the time lost since the first team's answer was disallowed will be put back on the clock. The first team will then have the opportunity to answer the bonus question.

When Time Runs Out

35. If a toss-up question is begun before time expires in a half, that question will be finished under the usual rules of play, including the bonus if the toss-up is answered correctly. The half is then over. A question will be considered to have been begun if the subject area has been completely read. The second half will begin with the first toss-up question not read in the first half.

Miscellaneous Rules

36. Substitutions may be made only at the half. If a team has five players, the player who did not play in the first half may substitute for any of the four starters. Teams may switch captains, but only at the half.
37. No one in the audience may communicate with participants **or officials** during the match; communication will result in ejection from the competition room. The officials may clear the room of coaches, alternates, and observers if communication is suspected. ***If someone in the audience shouts out an answer, and the team with which the shouter is associated can be determined, that team will forfeit the match. If the shouter cannot be determined by the officials to be associated with either team, the room will be cleared of everyone other than the officials and the eight players currently playing; the officials will add time back to the clock, and the question will be replaced with the next toss-up or bonus (whichever is appropriate). If the game should end due to question #25 being finished without time expiring, one additional toss-up and bonus question will be obtained to finish the game. (Note: the room will not be cleared for National finals games played at the National Building Museum.)***
38. Prior to each match, the two team coaches will introduce themselves to each other and will sit together in the back row of the competition room.
39. No notes may be brought to the competition table. Nothing may be written before the clock starts. Scratch paper will be provided at the beginning of each match and collected at half-time and at the conclusion of the match.
40. Calculators are not permitted.
41. Members of the audience, including the teams and coaches, will not write down the questions/answers the moderator reads or use any electronic recording or transmitting device, including digital cameras, cell phones, or computers during the match. At the Nationals, coaches will be provided with a team score sheet to track the number of questions answered by each individual student on their team. No one else in the competition room is permitted to write or make notes of any kind during the active competition. If this occurs, the individual(s) will be asked to leave the competition room. No cell phones may be used at any time in any of the competition rooms by students, coaches, or spectators.

Rules for the End of Round Robin Tournaments at Regional Events

42. At the regional events at the end of Round Robin: A tie-break procedure in the following order will be used to determine teams that advance to the elimination tournament:
 - (i) Head-to-head won/loss record
 - (ii) If two (2) teams are still tied, there will be a five toss-up question tiebreaker (interrupt and blurt penalties in effect). No bonus questions will be used during this segment of the competition. If still tied, another five toss-up question run-off will be used, etc. until the advancing team is determined.
 - (iii) If more than two teams are tied, each team, in separate rooms, will be given a series of ten toss-up questions (no bonus questions will be used during this segment of the

competition). The usual five (5) seconds will be allowed for a competitor to buzz in after the question is completely read. There are no interrupt penalties but also no reason to interrupt since all ten questions will be read. Scoring will be based on the number of questions right minus the number wrong. If two or more teams are still tied, procedure (ii) or (iii), as appropriate, will be used until the advancing teams are determined.

Rules for the End of Round Robin Tournaments at National Event

43. The middle school double elimination tournament will include 16 teams: the top two teams from each of the six divisions, plus four of the six third-place teams. At the end of the round-robin matches, any ties for first, second, and third places within a division will be broken using the procedures outlined below. Tie-breaker questions will consist of a set of five toss-ups and no bonuses, with the usual toss-up rules in effect, except where noted. When two teams are tied, they will play a head-to-head tiebreaker. When more than two teams are tied, each team will be given the same set of questions in separate rooms, with scores of +1 for each correct answer, -1 for each incorrect answer or blurt or consultation, and 0 for each unanswered question. These two types of tiebreaker matches will be referred to as “same-room” and “separate-room”, respectively. Note: Once tiebreaker games have begun, head-to-head results will no longer matter.
- (1) Divisional ties for first, second, and third places will be broken first. Head-to-head record in all round-robin games that involved two of the tied teams will be the first tiebreaker. If that does not settle the tie, then (a) if two teams remain tied for first place, a coin flip will decide the first and second places, (b) if two teams remain tied for second or third place, they will play a same-room tiebreaker, and (c) if more than two teams remain tied, they will play a separate-room tiebreaker. In cases (b) and (c), further ties will be broken by playing additional same-room or separate-room tiebreakers until first, second, and third places are decided, unless case (a) applies.
 - (2) The six third-place divisional teams will next compete for four double-elimination positions in a separate-room tiebreaker. Additional same-room or separate-room tiebreakers will be played until the four qualifiers are identified. The four teams will be ranked according to their qualifying order (or score, if they qualify at the end of the same tiebreaker round, with ties broken by coin flips). They will then be placed by rank into the double-elimination tournament from the top of the bracket down, except that no team will play a team from its division in the first round. If necessary, a team will be switched with the next-lowest adjacent rank until this restriction is satisfied.
44. At the National finals for high school: In the event of ties for the two positions from each round robin division to qualify for the double elimination tournament, the rankings of the teams in the Division Team Challenge will be used to break the tie.